

WHAT IS CLAIMED IS:

1. An apparatus for managing multiple virtual network domains which include a multiplicity of virtual circuits, the system comprising:

an information processing system that includes processor resources, input/output

connections, memory and operating system software;

multiple virtual network devices instantiated in shared memory;

multiple respective virtual network device interfaces instantiated in the shared memory wherein the respective virtual network device interfaces are associated with respective virtual network devices;

multiple respective virtual circuit interfaces instantiated in the shared memory; and

multiple respective bindings instantiated in the shared memory that respectively associate respective virtual network device interfaces and respective virtual circuit interfaces.

2. A computer readable medium comprising:

multiple virtual network devices instantiated in the medium;

multiple respective virtual network device interfaces instantiated in the medium wherein the respective virtual network device interfaces are associated with respective virtual network devices;

multiple respective virtual circuit interfaces instantiated in the medium; and

multiple respective bindings instantiated in the medium that respectively associate respective virtual network device interfaces and respective virtual circuit interfaces.

3. A network device for managing at least one virtual network domain which includes a multiplicity of virtual circuits, the device comprising:

processor resources, input/output connections, memory and operating system software;

multiple respective network device rule sets instantiated in the memory;

multiple respective network device interfaces instantiated in the memory wherein the respective network device interfaces are associated with respective network rule sets;

multiple respective virtual circuit interfaces instantiated in the memory; and

at least one respective bind data structure that can respectively provide a bind between a respective virtual circuit interface and either of at least two of the respective network device interfaces.

- [illegible]